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LETTER DATED 26 OCTOBER 1998 FROM THE EXECUTIVE CHAIRMAN OF THE SPECIAL COMMISSION ESTABLISHED BY THE SECRETARY-GENERAL PURSUANT TO PARAGRAPH 9 (b) (i) OF SECURITY COUNCIL RESOLUTION 687 (1991) ADDRESSED TO THE PRESIDENT OF THE SECURITY COUNCIL

During the informal consultations held by the Security Council on 13 October, I reported to the Council that a group of international experts would meet in New York on 22 and 23 October, to consider the findings from analyses, conducted in three laboratories, of special missile warhead remnants excavated in Iraq. The purpose of the laboratory analyses was to seek to establish the substances with which those special missile warheads had been filled. As Council members were aware, one substance at issue was the chemical warfare agent known as VX.

Council members will recall that results from an analysis conducted by a laboratory in the United States of America were given to the Special Commission in June 1998. Those results were passed to the Iraqi authorities during my visit to Baghdad from 11 to 15 June 1998.

When passing those initial results to the Iraqi side, I authorized at the same time that further laboratory analyses be conducted in the laboratory in the United States and then in two other laboratories, one in France, the other in Switzerland.

In July 1998, the Special Commission sent an international expert team to Baghdad to discuss the initial results of the chemical analyses which had been conducted in the laboratory in the United States and which had identified VX degradation products in the samples taken from special warhead remnants. At that time, the international experts judged the results valid, but the Iraqi side stated that it could not accept the results.

On my subsequent visit to Baghdad, on 3 August 1998, I raised again with Iraqi authorities the possibility of further discussions on the question of VX but, in the event, no such discussions took place.

On 1 September 1998, at the request of members of the Council, I wrote to the President of the Council, providing answers to some technical questions which members had posed. One of those questions was that of the discovery of VX degradation products on special warhead remnants.

Following the conclusion of its meeting on the evening of last Friday 23 October, the group of international experts gave me its report, which had been adopted unanimously by the experts.

Attached to the present letter is a copy of that report and its technical annex.

As indicated to the Council on 13 October, in addition to providing the report to members of the Council immediately, I propose to pass it, at the same time, to the Permanent Representative of Iraq for transmission to the authorities in Baghdad.

When passing the report to the Permanent Representative, I would propose to invite his particular attention, and through him that of the authorities in Baghdad, to three key aspects of the report: "all analytical data provided by the three laboratories were again considered conclusive and valid"; "the existence of VX degradation products conflicts with Iraq's declarations that the unilaterally destroyed special warheads had never been filled with chemical warfare agents"; and, the recommendations of the group of experts that the Special Commission invite Iraq "to explain first the origin and history of the fragments analysed by all three laboratories and then the presence of degradation products of nerve agents" and "to explain the presence of a compound known as VX stabilizer and its degradation product, and to provide more information on the Iraqi efforts during the period from mid-1988 to the end of 1990 to develop and produce VX by improved synthetic routes".

I might also mention that, consistent with the letter addressed to me by the President of the Security Council on 18 August 1998 (S/1998/769), to which I referred in my letter of 19 August addressed to the Deputy Prime Minister of Iraq, and with the terms of Security Council resolution 1194 (1998), which, inter alia, calls upon Iraq to resume dialogue with the Special Commission immediately, I will be asking the Permanent Representative of Iraq to express to the authorities in Baghdad the willingness of the Special Commission to resume work at the earliest possible moment with competent Iraqi authorities in order to address the questions posed by the report of the experts.

(Signed) Richard BUTLER

Annex

Report of the Group of International Experts on VX

On 22 and 23 October 1998, the United Nations Special Commission held, in New York, a meeting of international experts on the issue of VX. It was the third meeting in that area of discussions related to the evaluation of analytical results generated by the laboratories on samples taken from special missile warhead remnants. Twenty-one experts from seven countries (China, France, Russian Federation, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland, United States of America), and experts from the Special Commission, participated in the meeting.

The purpose of the meeting was to discuss all analytical results obtained in the course of the Commission's verification of Iraq's declarations related to the VX activities, and to assess how those results verify Iraq's declarations. Another purpose was to provide the Chairman of the Special Commission with recommendations concerning further steps to be taken in the attempts to finalize the verification process.

All participating experts were requested to provide their opinions on the above-mentioned issues.

The meeting began with the presentation made by the Commission's experts on the sequence and results of all VX-related sampling missions conducted by the Commission (see appendix).

The first samples were taken with respect to VX in April 1997, after Iraq declared the VX production facility and the dump site where bulk VX was disposed of. Those samples were analysed in the United States laboratory. VX degradation products were found on the equipment pointed out by Iraq and in the soil from the dump site. In addition to those chemicals, compounds known as VX stabilizer and its degradation product were identified in some of the samples from the dump site. Those results allowed the Commission to make further progress in their verification of Iraq's declarations. At that stage, Iraq accepted the results as proof of its claims on the production site and on the unilateral disposal of VX. According to the recommendations of the international expert team to the technical evaluation meeting in February 1998, the United States laboratory performed further analyses of samples from the same site. Their results confirmed the previous findings and provided more data for the evaluation of Iraq's declarations. In April/May 1998, the Commission undertook to verify Iraq's declarations on the filling of 45 special missile warheads through the analysis of samples taken from their remnants. Those warheads had been destroyed unilaterally by Iraq through demolition and buried in the desert. Of those 45 warheads, according to Iraq, 25 had been filled with biological warfare agents and 20 with a mixture of alcohols (isopropanol and cyclohexanol). The purpose of chemical analysis was to verify Iraq's statement on the 20 special warheads filled with alcohols. The same United States laboratory found VX degradation products in some of the samples from 46 fragments of the 45 special warheads. The chemicals found on the missile

warhead remnants were similar to those found at the VX dump site declared by Iraq. The laboratory reported those results to the Commission in June 1998.

In July 1998, the Commission requested that the United States laboratory analyse another set of samples taken from some 43 different remnants of the same 20 warheads. No chemical-warfare-related chemicals were found. However, chemicals known as degradation products of a decontamination compound were identified in five samples. Signatures of unidentified non-phosphorous compounds were found in many samples.

Before those results were known, the Commission requested the French and Swiss laboratories to analyse samples from 40 other fragments of the same 20 special warheads, the majority of which were not sampled during the first and second rounds of analysis conducted by the United States laboratory.

The French laboratory reported the presence of a degradation product of nerve agent (G- or V- agent) in one sample. (The French experts noted that the product could also originate from other compounds, such as detergents. The United States experts said that they were not aware of any of such compounds in connection with any commercial product.)

The Swiss laboratory did not find any chemical-warfare-related chemicals. However, both the Swiss and French laboratories found the chemicals known to be degradation products of a decontamination compound, as well as a large number of samples containing the same unidentified non-phosphorous compounds, which had been detected in the second set of samples analysed by the United States laboratory. (The French experts noted that the decontaminant could also have been used for the purpose of chemical destruction of biological warfare agents. The Commission and other experts emphasized that, according to Iraq's declarations, sampled missile fragments had been excavated from the burial site of chemical warheads, and that only potassium permanganate or a mixture of potassium permanganate and formaldehyde had been used for biological decontamination. In addition, such a view would have serious implications for the accounting of the biological special warheads.) Those chemicals had not been detected on the first set of samples of missile fragments analysed by the United States laboratory.

During the meeting, all analytical data provided by the three laboratories were again considered conclusive and valid. The difference in the results between the first set of samples taken by the United States laboratory in April and subsequent samples taken by the United States, Swiss and French laboratories in June/July was discussed by the experts. In particular, the presence of certain non-chemical-warfare-related compounds in a significant amount of the June/July samples, which are completely absent from the April set of samples, has no obvious explanation. In the course of the meeting, the chemists from all three laboratories gave more details on the performed chemical analyses.

Experts from the United States laboratory reported that they had re-evaluated all activities carried out in the laboratory in the course of chemical analyses in order to confirm that no cross-contamination or other mistakes had occurred.

Experts from the French laboratory reported that, as a result of their investigation of two samples which had been previously reported as containing ethyl- and methyl-phosphonic compounds, the presence of those compounds could not be confirmed.

Experts from the Swiss laboratory gave more details on technical aspects of their chemical analysis.

Over the past six months, a large number of chemical analyses have been carried out in three separate establishments. The results of that work has enabled the Commission to collect more data and to move forward in the investigation. The Commission appreciates the support of the relevant Governments and acknowledges the high standard of technical support provided.

The existence of VX degradation products conflicts with Iraq's declarations that the unilaterally destroyed special warheads had never been filled with any chemical warfare agents. The findings by all three laboratories of chemicals known to be degradation products of decontamination compounds also do not support Iraq's declarations that those warhead containers had only been in contact with alcohols.

As a result of the evaluation of analytical data, reported to the Special Commission by three laboratories, it is recommended that the Special Commission invite Iraq to explain first the origin and history of the fragments analysed by all three laboratories and then the presence of degradation products of nerve agents. It was also emphasized that Iraq would be invited to explain the presence of a compound known as VX stabilizer and its degradation product, and to provide more information on the Iraqi efforts during the period from mid-1998 to the end of 1990 to develop and produce VX by improved synthetic routes.

The present report was adopted by experts involved in the meeting on 23 October 1998.

New York, 23 October 1998, 1830 hours

ENCLOSURE TO THE REPORT
UNSCOM
October 1998

CHEMICAL ANALYSIS CARRIED OUT IN THE COURSE OF VERIFICATION OF IRAQ'S DECLARATIONS ON CHEMICAL WARFARE AGENT VX

- SAMPLING POLICY
- SEQUENCE OF EVENTS
- ANALYTICAL RESULTS REPORTED BY THE LABORATORIES OF SUPPORTING GOVERNMENTS
- EVALUATION OF ANALYTICAL RESULTS

I. SAMPLING OF PRODUCTION EQUIPMENT AND DISPOSAL SITE
II. SAMPLING OF SPECIAL MISSILE WARHEAD REMNANTS

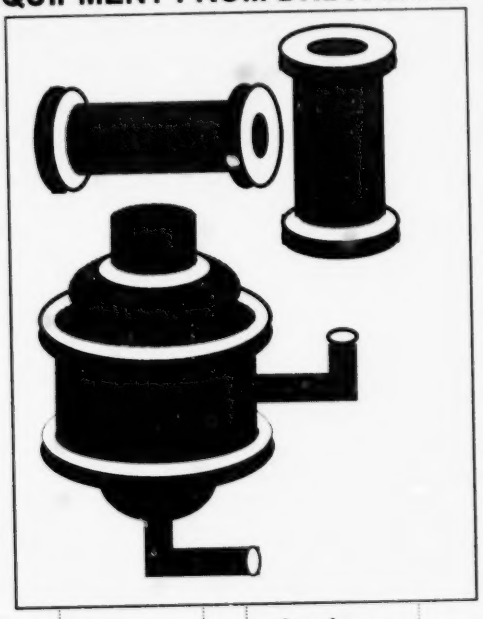
SAMPLING AT THE MUTHANNA STATE ESTABLISHMENT

IN 1996, IRAQ DECLARED THAT IT MADE SEVERAL ATTEMPTS TO PRODUCE VX AT THE DHIA PLANT LOCATED AT THE MUTHANNA STAE ESTABLISHMENT (MSE).

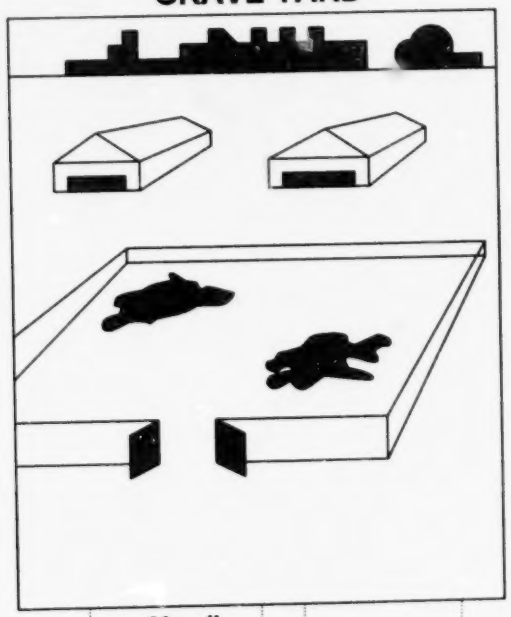
ACCORDING TO IRAQ, 3.9 TONNES OF VX WERE PRODUCED. THOSE WERE DUMPED AT THE" GRAVE YARD" OF MSE.

THE COMMISSION UNDERTOOK TO VERIFY THESE CLAIMS BY SAMPLING SOME REMAINING PIECES OF EQUIPMENT FROM THE DHIA PLANT AND THROUGH THE ANALYSIS OF SOIL FROM THE GRAVE YARD.

EQUIPMENT FROM DHIA PLANT



GRAVE YARD



6 swipes

6 swipes

FEBRUARY 1998

20 soil samples

12 soil samples

APRIL 1997

APRIL 1997

US CHEM LAB

1997

#1872 - EMPA
#1876 - MPA

1998

#4810 - MPA, DMMP
#4804 - EMPA, MPA
#4816 - MPA, MMPA
#4817 - EMPA, MPA
#4822 - MPA, MMPA
#4823 - EMPA, MPA

1998

#4805 - MPA
#4820 - MPA
#4780 - MPA
##4784, 4786, 4788, 4790, 4792, 4728, 4730 - MPA

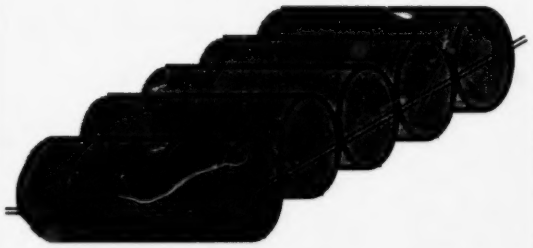
1997

3797- EMPA, DCHCDI
#3796 - MPA
#3798 - MPA,RSSR, RSR,RSSSR

/...

SPECIAL MISSILE WARHEADS

75 WARHEADS IN TOTAL



ACCORDING TO IRAQ'S DECLARATIONS, 75 SPECIAL WARHEADS WERE PRODUCED IN TOTAL. OF THESE, 25 WARHEADS WERE BIOLOGICAL AND 50 WARHEADS WERE CHEMICAL.

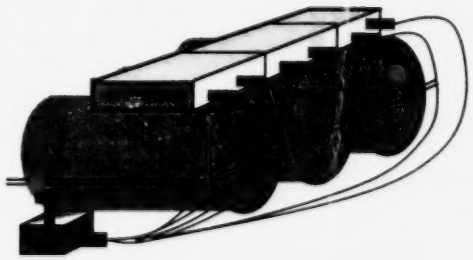
OF 50 CHEMICAL WARHEADS, 16 WARHEADS WERE FILLED WITH GB/GF MIXTURE(SARIN/CYCLOSARIN) AND 34 WARHEADS WERE FILLED WITH THE MIXTURE OF ALCOHOLS (ISOPROPANOL/CYCLOHEXANOL)

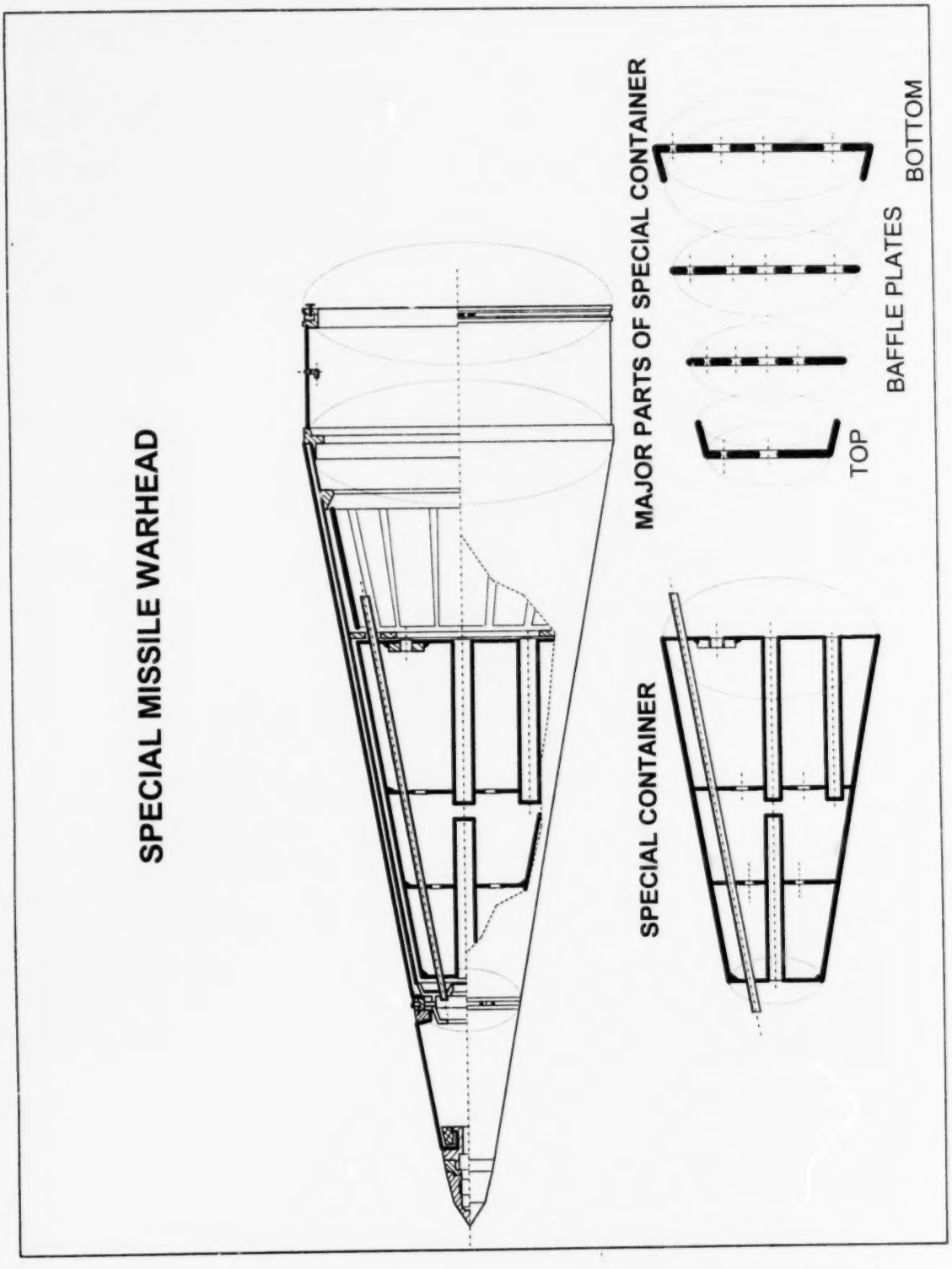
30 CHEMICAL WARHEADS WERE DESTROYED UNDER UNSCOM SUPERVISION, INCLUDING 16 WARHEADS FILLED WITH GB/GF AND 14 WARHEADS FILLED WITH ALCOHOLS

45 WARHEADS WERE DESTROYED BY IRAQ UNILATERALLY BY DEMOLITION, INCLUDING 25 BIOLOGICAL WARHEADS AND 20 CHEMICAL WARHEADS FILLED WITH ALCOHOLS

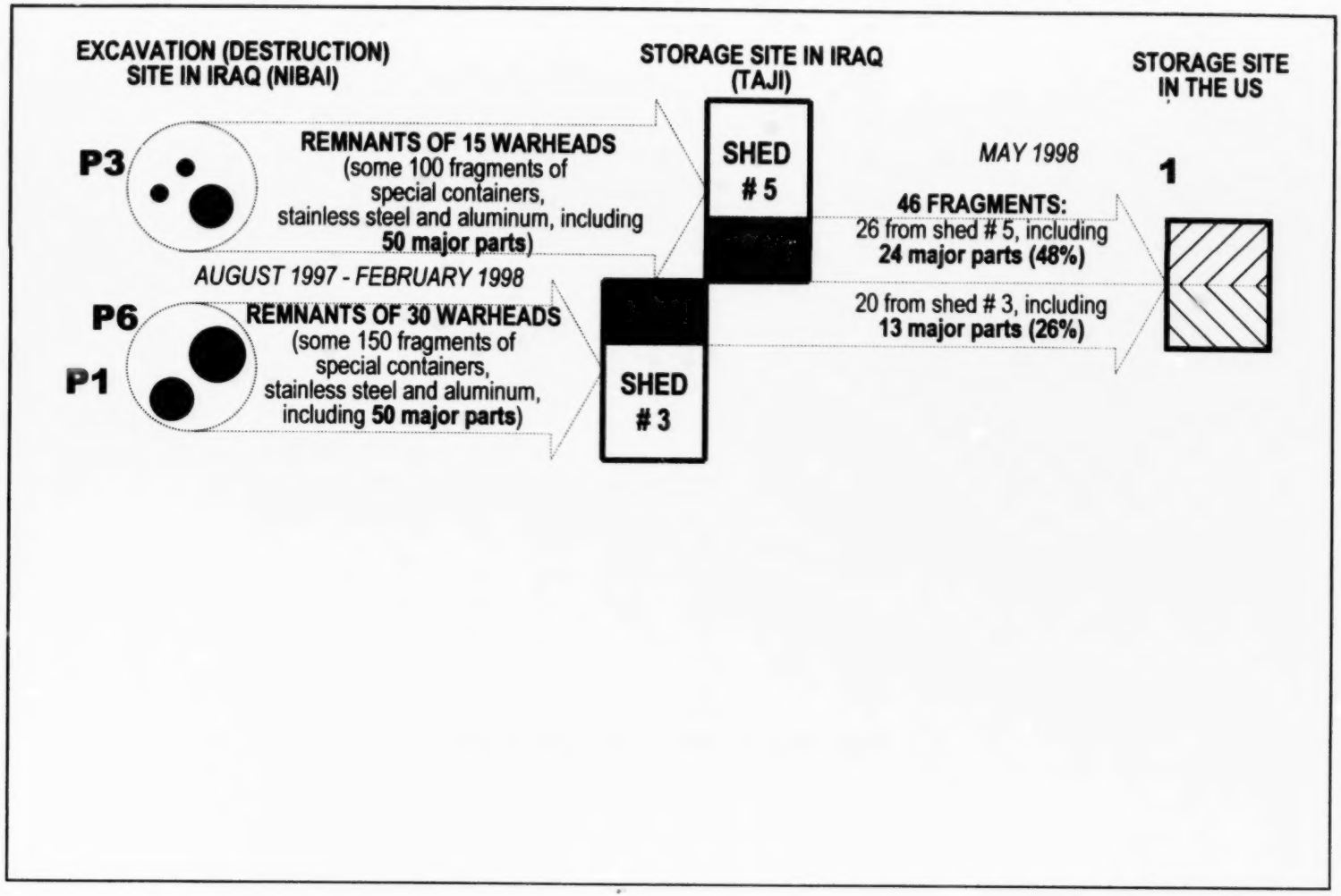
30 WARHEADS DESTROYED UNDER UNSCOM SUPERVISION

45 WARHEADS DESTROYED UNILATERALLY BY IRAQ

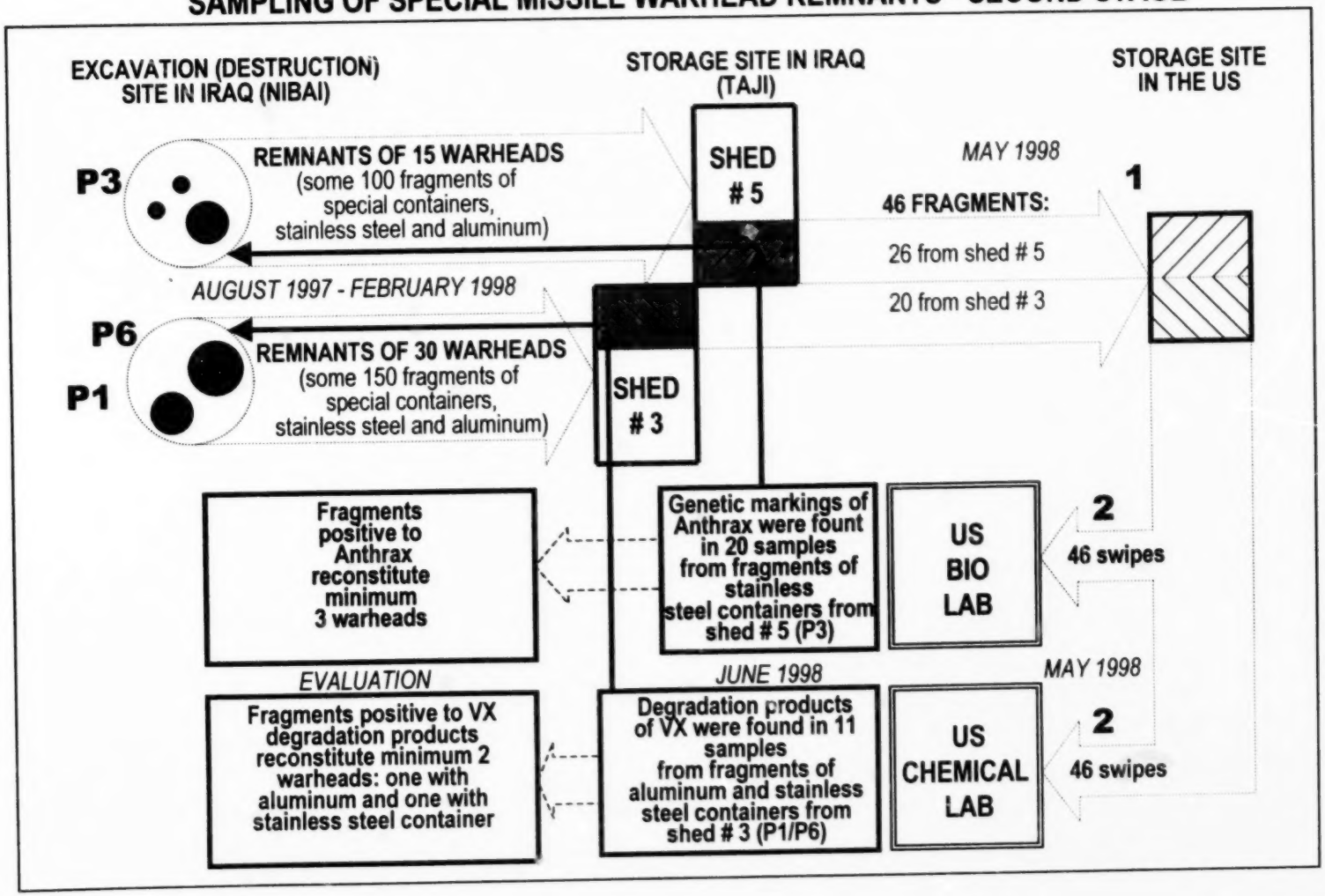



SPECIAL MISSILE WARHEAD
MAJOR PARTS OF SPECIAL CONTAINER
TOP
BAFFLE PLATES
BOTTOM
SPECIAL CONTAINER

SAMPLING OF SPECIAL MISSILE WARHEAD REMNANTS - FIRST STAGE

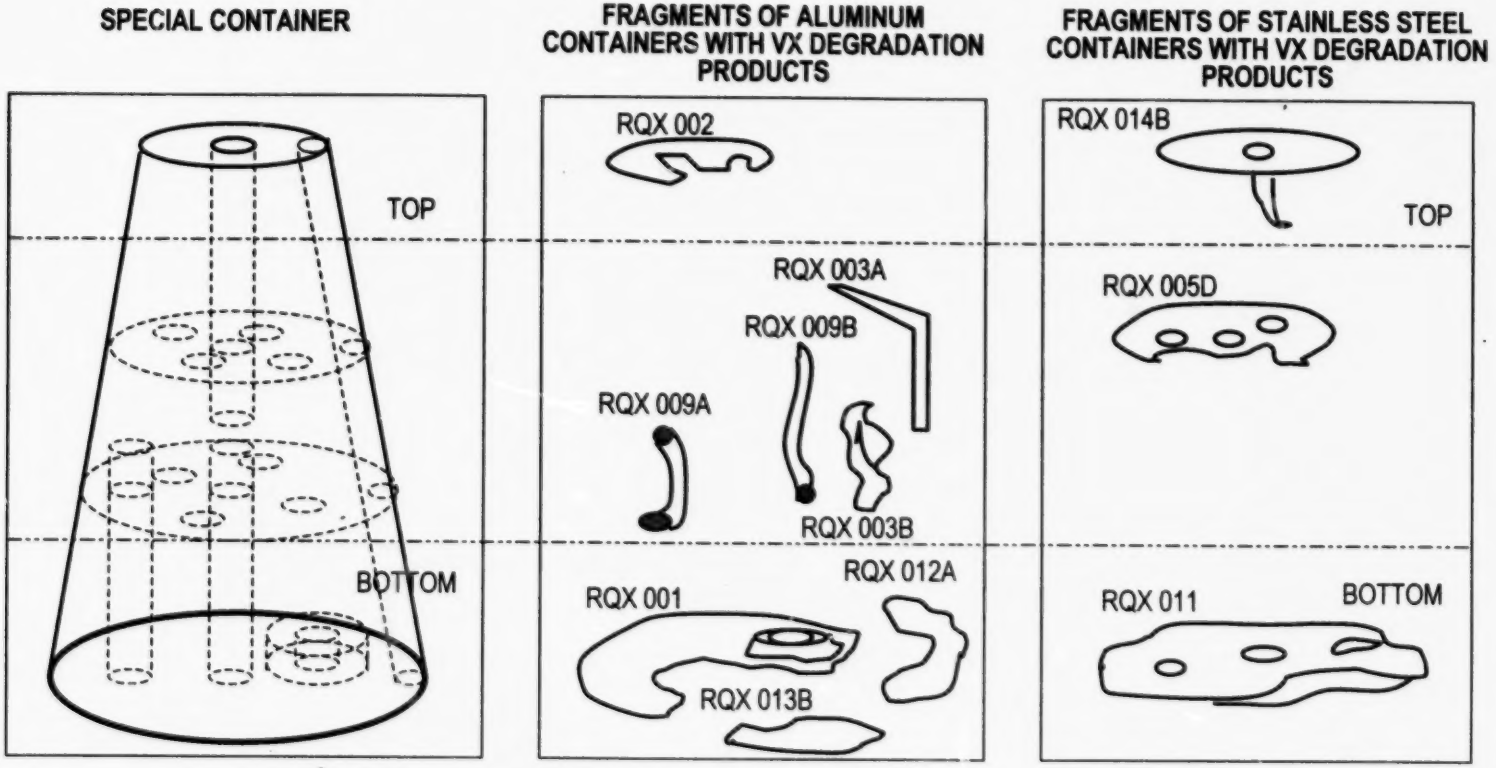

EXCAVATION (DESTRUCTION) SITE IN IRAQ (NIBAI)
STORAGE SITE IN IRAQ (TAJI)
STORAGE SITE IN THE US
P3
REMNANTS OF 15 WARHEADS
(some 100 fragments of special containers, stainless steel and aluminum, including 50 major parts)
AUGUST 1997 - FEBRUARY 1998
P6
P1
REMNANTS OF 30 WARHEADS
(some 150 fragments of special containers, stainless steel and aluminum, including 50 major parts)
SHED # 5
SHED # 3
MAY 1998
46 FRAGMENTS:
26 from shed # 5, including 24 major parts (48%)
20 from shed # 3, including 13 major parts (26%)
1

SAMPLING OF SPECIAL MISSILE WARHEAD REMNANTS - SECOND STAGE


EXCAVATION (DESTRUCTION) SITE IN IRAQ (NIBAI)
STORAGE SITE IN IRAQ (TAJI)
STORAGE SITE IN THE US
P3
REMNANTS OF 15 WARHEADS (some 100 fragments of special containers, stainless steel and aluminum)
SHED # 5
MAY 1998
46 FRAGMENTS:
26 from shed # 5
20 from shed # 3
1
AUGUST 1997 - FEBRUARY 1998
P6
P1
REMNANTS OF 30 WARHEADS (some 150 fragments of special containers, stainless steel and aluminum)
SHED # 3
Fragments positive to Anthrax reconstitute minimum 3 warheads
Genetic markings of Anthrax were fount in 20 samples from fragments of stainless steel containers from shed # 5 (P3)
US BIO LAB
2
46 swipes
EVALUATION
JUNE 1998
MAY 1998
Fragments positive to VX degradation products reconstitute minimum 2 warheads: one with aluminum and one with stainless steel container
Degradation products of VX were found in 11 samples from fragments of aluminum and stainless steel containers from shed # 3 (P1/P6)
US CHEMICAL LAB
2
46 swipes

/....

EVALUATION OF THE ANALYTICAL RESULTS OF THE US LABORATORY

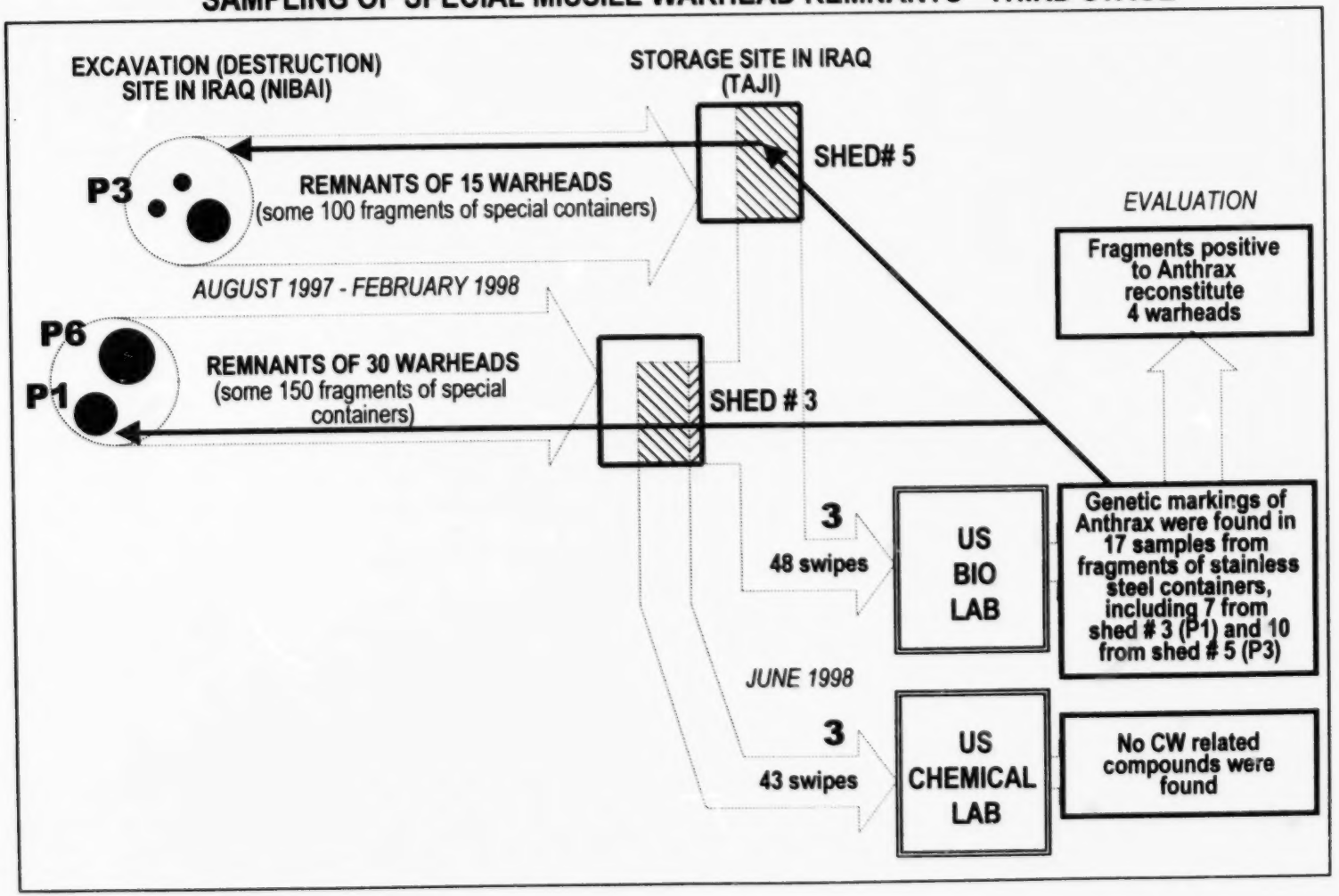


SAMPLE NUMBER / CHEMICALS FOUND

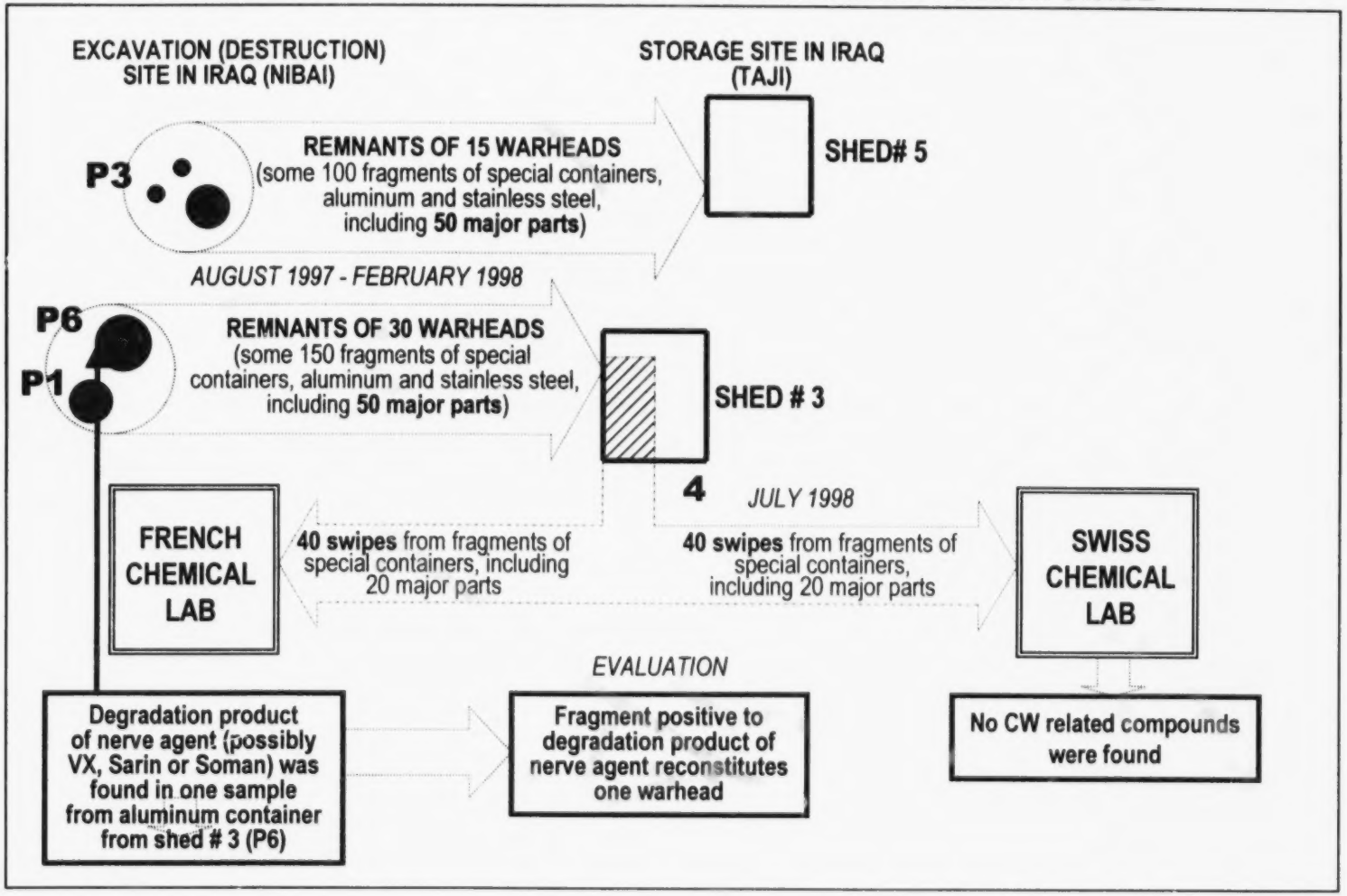
RQX 001.....EMPA, RSSR, RSR, DCHDCI, DCHU
RQX 002.....EMPA, RSSR, RSR, RSSSR, DCHCDI, DCHU
RQX 003A.....EMPA, MPA, RSSR, RSR, RSSSR, DCHCDI, DCHU
RQX 003B.....EMPA, RSSR, RSR, DCHCDI, DCHU
RQX 009A.....RSSR
RQX 009B.....RSSR, RSR, DCHCDI, DCHU
RQX 012A.....RSSR, DCHCDI, DCHU
RQX 013B.....EMPA, RSSR

RQX 005D.....EMPA, MPA
RQX 011.....EMPA, RSSR, DCHCDI
RQX 014B.....MPA

SAMPLING OF SPECIAL MISSILE WARHEAD REMNANTS - THIRD STAGE

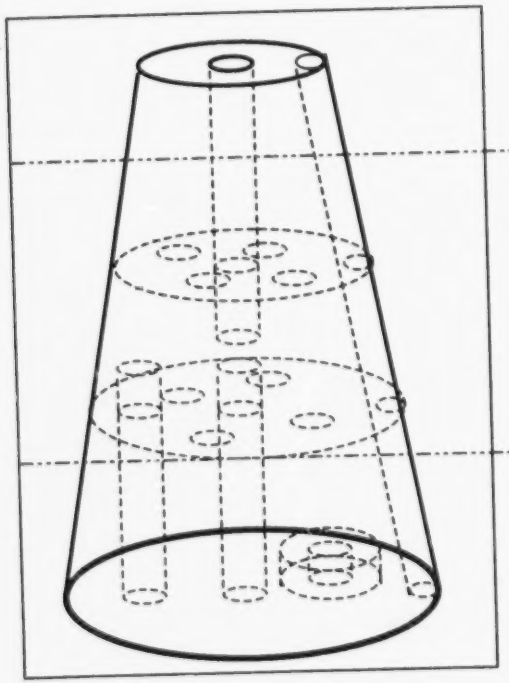

EXCAVATION (DESTRUCTION) SITE IN IRAQ (NIBAI)
STORAGE SITE IN IRAQ (TAJI)
P3
REMNANTS OF 15 WARHEADS
(some 100 fragments of special containers)
SHED# 5
EVALUATION
Fragments positive to Anthrax reconstitute 4 warheads
AUGUST 1997 - FEBRUARY 1998
P6
P1
REMNANTS OF 30 WARHEADS
(some 150 fragments of special containers)
SHED # 3
3
48 swipes
US BIO LAB
Genetic markings of Anthrax were found in 17 samples from fragments of stainless steel containers, including 7 from shed # 3 (P1) and 10 from shed # 5 (P3)
JUNE 1998
3
43 swipes
US CHEMICAL LAB
No CW related compounds were found

SAMPLING OF SPECIAL MISSILE WARHEAD REMNANTS - FOURTH STAGE

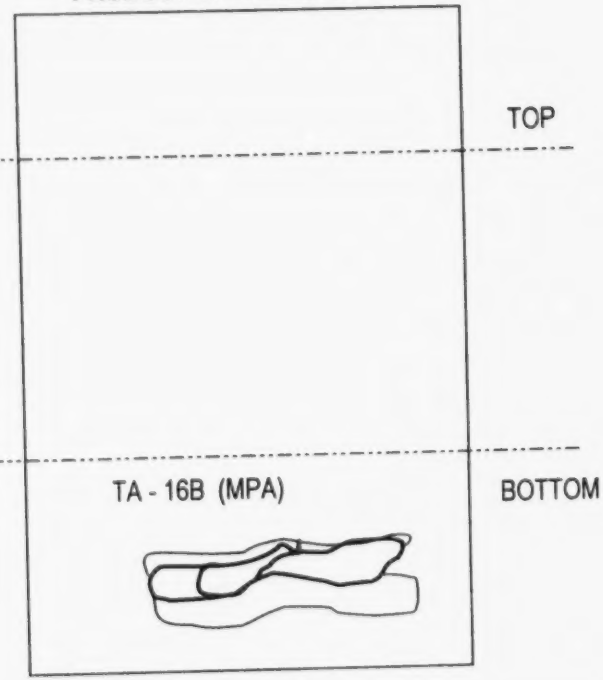

EXCAVATION (DESTRUCTION) SITE IN IRAQ (NIBAI)
STORAGE SITE IN IRAQ (TAJI)
P3
REMNANTS OF 15 WARHEADS (some 100 fragments of special containers, aluminum and stainless steel, including 50 major parts)
SHED# 5
AUGUST 1997 - FEBRUARY 1998
P6
P1
REMNANTS OF 30 WARHEADS (some 150 fragments of special containers, aluminum and stainless steel, including 50 major parts)
SHED # 3
4
JULY 1998
FRENCH CHEMICAL LAB
40 swipes from fragments of special containers, including 20 major parts
40 swipes from fragments of special containers, including 20 major parts
SWISS CHEMICAL LAB
EVALUATION
Degradation product of nerve agent (possibly VX, Sarin or Soman) was found in one sample from aluminum container from shed # 3 (P6)
Fragment positive to degradation product of nerve agent reconstitutes one warhead
No CW related compounds were found

EVALUATION OF THE ANALYTICAL RESULTS OF THE FRENCH LABORATORY

SPECIAL CONTAINER



FRAGMENT OF ALUMINUM CONTAINER WITH DEGRADATION PRODUCT OF NERVE AGENT



IN THE SAMPLE # TA - 16B THE FRENCH LABORATORY DETECTED MPA (METHYLPHOSPHONIC ACID)

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SAMPLING OF SPECIAL MISSILE WARHEAD REMNANTS - SEQUENCE OF EVENTS